

GEOMETRY SEMINAR

Helicoids and Catenoids in $M \times \mathbb{R}$ **Ronaldo de Lima**

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Time: 10:30 am

Acesso à Plataforma Teams: <https://bit.ly/3dvyaXT>

Abstract. In this talk, we consider an arbitrary smooth Riemannian manifold M^n , and address the problem of constructing minimal hypersurfaces in $M \times \mathbb{R}$ which have the same fundamental properties of the standard helicoids and catenoids of Euclidean space \mathbb{R}^3 . We call them *vertical helicoids* and *vertical catenoids*. We establish conditions on M for the existence of such minimal hypersurfaces, and also develop general methods for their construction.

References

- [1] de Lima, R.F., Roitman, P.: Helicoids and catenoids in $M \times \mathbb{R}$. Preprint (available at: <https://arxiv.org/abs/1901.07936>).